

## Seabird observations from the Gulf of Alaska

by Toby Burke



Early this past September I was fortunate to be designated a marine bird and mammal observer for the U.S. Fish and Wildlife Service's Migratory Bird Branch in Anchorage. I was charged with systematically censusing marine birds and mammals in conjunction with a Global Ocean Ecosystem Dynamics (GLOBEC) oceanographic research cruise aboard the U.S. Fish and Wildlife Service's research ship, the M/V Tiglax, in the Gulf of Alaska.

Accordingly, on September 13<sup>th</sup> I boarded the Tiglax in Homer where the ship's crew immediately pulled anchor and set a course for Seward, where they would take on the GLOBEC research crew which consisted of University of Alaska Fairbanks faculty and graduate students.

Between Homer and Seward the Tiglax traveled through the near-shore waters of the Kenai Peninsula's outer coast, generally within five or less miles of its deeply incised shore and often remarkably close to its prominent headlands. The weather was somber gray, deeply overcast with intermittent banks of fog, but the winds were fair and the ship plied easily through the light swell. These conditions were con-

ducive to marine bird and mammal surveying.

In all honesty, probably only 5% of an observer's time is devoted to observing and identifying marine mammals, the overwhelming majority being devoted to observing and identifying the far more numerous and diverse marine avifauna. Most observers are chosen primarily for their seabird identification skills but if an observer is brutally honest, equally important is their ability to endure long hours on a ceaselessly rolling and pitching deck in less than ideal weather, all too often with nary a bird in sight.

On the initial 16 hour transit from Homer to Seward most of the bird species observed were locally breeding species that are commonly encountered in similar near-shore waters of the Kenai Peninsula such as Glaucous-winged and Herring Gulls; Black-legged Kittiwakes; Horned and Tufted Puffins; Double-crested, Red-faced, and Pelagic Cormorants; Common Murres; Marbled Murrelets; and the occasional Parakeet and Rhinoceros Auklets.

For the most part the truly pelagic, or open ocean, species such as storm-petrels, shearwaters, fulmars, and albatrosses were absent as one would generally expect. These off-shore birds are infrequently encountered in near-shore waters. Because of this most people, short of marine ornithologists and fishermen, are not generally familiar with these oceanic bird species.

Once the GLOBEC research crew boarded, we set out from Seward straight out in to the Gulf of Alaska, stopping at 10 mile intervals at established stations to conduct oceanographic sampling until we were 130 miles off shore and beyond the continental shelf.

This oceanographic sampling focused primarily on chemical oceanography during the day, more specifically marine chemistry, by collecting water samples throughout the entire water column from surface to ocean bottom. At night oceanographic sampling focused primarily on biological oceanography, more specifically sampling for planktonic organisms, by trawling in between the established stations.

I was able to conduct marine and seabird censuses, continuous line transects, only during daylight hours when the ship was traveling between sampling stations. Usually that meant relatively short transects

approximately one hour in duration but occasionally transects lasted six, eight, or even twelve hours. These very long transects occurred when traveling between far flung sets of oceanographic sampling stations and of course when traveling between Homer and Seward.

Though we encountered dozens of whales and porpoises, easily the highlights of the cruise for this “bird nerd” were the thousands of pelagic seabirds observed far off shore in the Gulf. Black-footed and Laysan Albatrosses; Northern Fulmars; Sooty, Short-tailed, and Buller’s Shearwaters; Fork-tailed and Leach’s Storm-Petrels; Mottled Petrels; Pomarine Jaegers; and South Polar Skuas made up the majority of the pelagic seabird community. We generally started observing them 30 or miles off shore and easily in their greatest densities in the continental shelf area, 80 to 130 miles off shore, as expected.

As expected? Yes, because nutrient upwelling from the cold waters of the Gulf of Alaska basin flowing up slope and mixing with shallower waters of the continental shelf provide for enhanced production of phytoplankton. Phytoplankton, being the principle primary producers of the world oceans, forms the base

of the marine food chain. Zooplankton feeding on phytoplankton is in turn fed upon by higher trophic organisms such as fishes; marine mammals and birds feed on the fish or directly on the zooplankton itself. Consequently, many marine organisms reach their greatest densities at or near these shelf upwellings.

So, despite having to endure fog, high winds, big seas, the endless (and sometimes violent) motion of the ship’s deck under one’s feet, and often bird-less skies, the week spent traversing the Gulf of Alaska this past September eventually inspired this would-be ornithologist to get off shore more often to observe the underappreciated, seldom seen but abundant avifauna of the Gulf of Alaska’s continental slope.

*Toby Burke is a refuge biological technician who is intrigued by the status and distribution of Alaska and Kenai Peninsula birds and enjoys birding with his wife and family. To report or listen to interesting local bird sighting call the Central Kenai Peninsula Birding Hotline sponsored by Kenai National Wildlife Refuge at 262-2300. Previous Refuge Previous Refuge Notebook columns can be viewed on the Web at <http://www.fws.gov/refuge/kenai/>.*